UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,907	12/03/2003	Allen Tsz-Chiu Wong	200-65700 (PB030024AF)	4188

56929 7590 08/12/2008
LAW OFFICES OF MARK C. PICKERING
P.O. BOX 300
PETALUMA, CA 94953

EXAMINER	
SALCE, JASON P	

ART UNIT	PAPER NUMBER
2623	

MAIL DATE	DELIVERY MODE
08/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,907	WONG ET AL.	
	Examiner	Art Unit	
	Jason P. Salce	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-10 and 12-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-10 and 12-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 5/13/2008 have been fully considered but they are not persuasive.

Applicant argues that there is nothing in Brooks that teaches or suggests that processor 204 determines whether switching unit 104 is outputting the maximum number of channels (whether the value stored in the first memory location is equal to the value stored in the second memory location) "each time" a channel request message is received from the device as required by claim 2.

The examiner disagrees and notes that Paragraph 0024 clearly states that multiple requests are sent from a plurality of set-top boxes. Further, as stated in the previous Office Action with regards to claim 2, Paragraph 0034 states that if channels in the system are oversubscribed that a requesting set-top box will not be permitted to receive the video content. Paragraph 0034 simply presents the scenario where the system is capable of handling a request when the system is oversubscribed. Clearly if the Brooks system is capable of handling a request in this manner, Brooks would handle subsequent requests in the same manner, otherwise other viewers would not be notified that they cannot currently receive the video content/television programming.

Applicant further argues that because a new channel can be created when a viewer requests video content, a viewer is not always subject to a scenario when all of the carries in the CATV system are oversubscribed and therefore Brooks cannot teach

making a comparison between the two values in the first and second memory locations "each time" a request is made.

The examiner disagrees and notes that the claims do not require that a comparison is made "each time" a request is made. Even if the claim required that the comparison is made "each time" the viewer makes a request, the system could not determine that channels are oversubscribed if such a comparison were made intermittently.

Therefore, Applicant's amended claims still read on the prior art of record (**see the updated rejection below**).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2-3, 6-7, 9-10, 12-13, 15 and 17-20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Brooks (U.S. Patent No. 2003/0056217).

Referring to claim 2, Brooks discloses a first memory location to store a value that represents a maximum number of channels that can be received by an interface

connected to the system, and store the maximum number in the first register (**see Paragraph 0025 for column 304 in memory 206 enumerating each program channel X selectable by a subscriber through a set-top terminal, which ranges from 1 to K, therefore a maximum number of channels that can be received is determined and stored in a first register**).

Brooks also discloses a second memory location to store a value that represents a current number of different channels that are being sent to the interface, and store the current number in the second register (**see Paragraph 0028 for step 508 determining the current number of channels that are being sent to the interface (modulator bank) by incrementing the second register/table 306 in assignment table 300 and if the register/table 306 value for channel 1 is zero, then the channel is not currently being sent to the interface (modulator bank), therefore when a channel is requested, controller 112 increments channel 1's register/table 306 value to 1 and requests that the channel be sent to the proper modulator bank on a specified carrier**). **The examiner notes that this clearly teaches that a current number of transmitted channels is determined and stored in a second register.**

As rebutted above by the examiner, Merriam-Webster's dictionary defines the noun "number" as, "*a word, symbol, letter, or combination of symbols representing a number*" and "*a numeral or combination of numerals or other symbols used to identify or designate*". Therefore, Column 304 in Figure 4 of Brooks teaches a maximum number of channels from 1 to K (combination of numerals) and a current number of channels in Column 306 of Figure 4 when an

entry in Column 306 is non-zero. Note that Column 306 has three entries that are non-zero, therefore a determination is made that a current number of three different channels are being sent to the interface and stored in register 306. Further note that if a user requests to view channel 1, the entry in Column 306 corresponding to channel 1 would be incremented to 1 and then the current number of channels being sent to the interface would be 4. The combination of numerals in Column 306 (second register) are used to determine the current number of channels. The examiner recommends that Applicant apply clarifying language to the claim stating that single values are being stored, which represent a maximum and current number of channels received by an interface (router).

Brooks discloses a state machine connected to the first and second memory locations (**see Figure 4 for a first register in the form of table 'X' 304 and a second register in the form of table N_{PCHX} 306 and further note Figure 3 for controller 112 containing state machine/processor 204**).

Brooks also discloses receiving a channel request message from a device connected to the interface, the channel request message to identify a requested channel (**see Paragraph 0026**).

Brooks also discloses determining whether the value stored in the first memory location is equal to the value stored in the second memory location each time a channel request message is received from the device (**see Paragraph 0034 in the further event that the carriers (channels) in the CATV system 10 are oversubscribed, i.e., no available carrier can be assigned by controller 112 to carry new program**

material requested by the set-top terminal in the neighborhood, "blocking" may be implemented such that the requesting set-top terminal is temporarily denied access to the new program material. Therefore, if a user sends a new channel message to an interface, a processor/state machine must inherently determine if the current number of channels currently subscribed to are greater than or equal to the maximum number of channels available on the CATV system).

Referring to claim 3, Brooks discloses that the state machine further determines whether the device is currently receiving an old channel each time the value stored in the first memory location is determined to be equal to the value stored in the second memory location (**see again Paragraph 0026 and 0034**).

Referring to claim 6, Brooks discloses that the device is a member of a group (**see Figure 1 for set top terminals 128-1 through 128-L being service by a single service area node 126 and therefore every set top terminal under service area node 126 is a group**).

Referring to claim 7, Brooks discloses that when the maximum number is not equal to the current number (**channels are not oversubscribed, as described in Paragraph 0034**), the state machine output a group specific query to the group (**see Paragraph 0028 for multicasting control messages to a group of set-top terminals**).

Referring to claim 9, see the rejection of claim 7 and further note Paragraph 0035 for also allowing a user to request a new channel after a timer has expired.

Referring to claim 10, Brooks discloses that when the maximum number is equal to the current number, and the device is not currently receiving a channel, the state machine drops the channel request message (**see again Paragraph 0034**).

Referring to claims 12-13, see the rejection of claims 2-3, respectively.

Referring to claim 15, see the rejection of claims 6-7.

Referring to claims 17-18, see the rejection of claims 9-10, respectively.

Referring to claims 19-20, Brooks discloses that the maximum number of channels represents a maximum number of channels that can be simultaneously received by the interface (**see Paragraph 0021-0022 for each interface receiving p channels simultaneously, which is a maximum number channels that the viewer can choose from**). ***Further note Paragraph 0028 for the headend routing a channel to the service node 126 only if the requested channel has not been assigned to a carrier frequency distributed by service node 126.***

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al. (U.S. Patent Application Publication 2003/0056217) in view of Sparrell et al. (U.S. Patent Application Publication 2004/0268406).

Referring to claim 4, Brooks discloses all of the limitations in claim 3, but fails to teach that the state machine stops transmission of the old channel to the device each time the device is determined to be currently receiving an old channel, and the value stored in the first memory location has been determined to be equal to the value stored in the second memory location ().

Sparrell discloses a system for transmitting various channels to multiple set-top box units **(see Figure 1)**. Sparrell further discloses that when all of the available network resource channels are being used **(the maximum number of channels available in the system is equal to the current number of channels being used)** that a user **(Dad)** can request stopping a transmission of the previously requested channel **(by Mom)** and outputting the new requested channel **(requested by Dad)** after the previously requested channel has been stopped **(see Paragraph 0077)**.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the system of Brooks, to include the pre-emption functionality, as taught by Sparrell, for the purpose of providing a system that identifies,

assigns and reserves available network resources in a manner which most efficiently uses the resources of the a distributed network (**see Paragraph 0026 of Sparrell**).

Claims 4-5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al. (U.S. Patent Application Publication 2003/0056217) in view of Patel (U.S. Patent No. 6,973,081).

Referring to claim 14, Brooks discloses determining when the value stored in the first memory location is equal to the value stored in a second memory location (**see the rejection of claim 12**), as well as all of the limitations of claim 13, but fails to teach the limitations of claim 14.

Patel discloses stopping a transmission of the old channel to the device each time the device is determined to be currently receiving the old channel and starting a transmission of the requested channel to the device after transmission of the old channel to the device has been stopped (**see Column 11, Line 58 through Column 12, Line 14 for stopping a current transmission on an old channel (the Unicast channel) and starting transmission over a new channel (a multicast channel)**).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the transmission system, as taught by Brooks, using the seamless switching transmission system, as taught by Patel, for the purpose of providing a transparent, seamless, smooth switch from receiving data over a Unicast channel to receiving data over a multicast channel (**see Column 2, Lines 1-5 of Patel**).

Referring to claims 4-5, see the rejection of claim 14.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al. (U.S. Patent Application Publication 2003/0056217) in view of Nguyen et al. (U.S. Patent No. 7,228,356).

Referring to claim 21, Brooks discloses all of the claim limitations of claim 2, but fails to teach transmitting a leave message to the state machine before transmitting a channel request message to the state machine, the leave message identifying a channel which is no longer to be transmitted to the device.

Nguyen discloses transmitting a leave message to the state machine before transmitting a channel request message to the state machine, the leave message identifying a channel which is no longer to be transmitted to the device (**see Figure 2 for sending a leave message indicating to leave channel 1 (channel no longer to be transmitted) before transmitting a channel request message to receive channel 2**).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the channel requesting system, as taught by Brooks, using the leave message transmission process, as taught by Nguyen, for the purpose of providing faster execution of channel changing operations (**see Column 3, Lines 55-56 of Nguyen**).

Referring to claim 22, see the rejection of claim 21.

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al. (U.S. Patent Application Publication 2003/0056217.

Referring to claim 8, Brooks discloses all of the limitations of claim 7, and further teaches that the state machine outputs the new subscribed-to channel to the set top box after the group specific query has been output (**see the rejection of claim 7**). Brooks fails to teach that this is done before a group specific query timer has expired.

The examiner takes Official Notice to the fact that the IGMP (Internet Group Management Protocol) specifically provides provisions for sending a group message query to a plurality of client devices. When a client device receives a group message query a timer has been started by the device sending the group message query and if the client device sending a report back to the sending device before the timer has expired, the data stream is transmitted to the client device that sent the report.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the video system, as taught by Brooks, using the IGMP protocol, as taught by the examiner's Official Notice, for the purpose of providing client devices the capability of receiving IP multicasts.

Referring to claim 16, see the rejection of claim 8.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Salce whose telephone number is (571) 272-7301. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason P Salce/
Primary Examiner, Art Unit 2623

Jason P Salce
Primary Examiner
Art Unit 2623

August 6, 2008